



PAT MCCRORY
Governor

DONALD R. VAN DER VART
Secretary

MICHAEL SCOTT
Director

*Via Electronic Mail – jimsitterly@mohicanmills.com
Via First Class Mail*

August 19, 2016

James Sitterly
Mohican Mills Inc.
Post Office Box 190
Lincolnton, North Carolina 28092

Re: **Travis Knits, Inc.**
1515 West Academy Street
Cherryville, Gaston County, North Carolina
NONCD0002787

Dear Mr. Sitterly:

The Inactive Hazardous Sites Branch (IHSB) of the North Carolina Division of Waste Management (Division) has reviewed the July 18, 2016 Phase I Remedial Investigation (RI) Work Plan (Plan) prepared by Hart & Hickman, PC (Hart & Hickman) for the above referenced Site, which was received on July 18, 2016. Based on this review and information within the Division's records, the IHSB offers the following comments:

General Comments

- 1) The purpose of the Phase I RI is to identify all releases of hazardous substances to the environment, characterize the chemical nature of such releases, and collect sufficient sampling data in order to compile a list of contaminants of concern. All assessment activities and subsequent reporting of the Site must fully comply with the technical and administrative requirements of the IHSB's *Guidelines for Assessment and Cleanup (Guidelines)* and the Division's *Vapor Intrusion Guidance*.
- 2) In addition to dry-cleaning, the use of tetrachloroethene (PCE) in many processes of textile manufacturing is well documented. Solvents including PCE have been used for scouring and finishing of fabric, in specialty operations such as tricot and lace splitting, to clean textile machinery, as a spot remover during product inspections, and as a degreaser in shopwork. PCE has also been used extensively to aid in textile dyeing operations and as a dye carrier.

Specific Comments

- 1) All areas known, suspected, or having a reasonable probability of being contaminated by hazardous substances must be investigated. To assist your planning of assessment activities

and development of a Conceptual Site Model (CSM), the IHSB suggests that you consider separating known and suspect areas into general zones or groupings. For example, based on information readily available, one scenario could include the following: wastewater pretreatment and industrial sewerage, dye and chemical warehouse, bulk chemical storage and PCE tank, chemical storage and dye laboratory, fabric preparation and dye house, pad dyeing and splitting, tenet frames and finishing, and floor drains and trenches.

- 2) The July 15, 1993 Air Permit for Travis Knits, Inc. (Travis Knits) reported that biphenyl was used as a solvent in the finishing of knit fabrics. In addition, the August 20, 2015 Phase II Environmental Site Assessment (ESA) by Blue Ridge Environmental Services, Inc. reported the detection of biphenyl in soil near the bulk chemical storage area. However, the March 15, 2016 Soil and Groundwater Assessment Report (Soil & GW Report) by Hart & Hickman did not include laboratory analyses for this compound nor all the Volatile and Semi-Volatile Compounds (VOCs) on the current United States Environmental Protection Agency's (EPA's) Contract Laboratory Program (CLP) Target Compound List (TCL). Please contact your laboratory and request an appropriate revision to the analytical parameters within the aforementioned laboratory report and include a copy in subsequent reporting.
- 3) Geolocation data of soil and groundwater samples (e.g. soil borings and groundwater monitor wells) will be of sufficient quality to prepare (upon request) a certified site survey plat by a professional land surveyor, which clearly illustrates the frequency and extent of hazardous substances in Site environmental media. If these sample locations can be adequately field marked and preserved, professional survey data may be collected and submitted in subsequent reporting. In the interim, please report geospatial data for all locations of environmental samples (e.g. soil borings, groundwater monitor wells, and water-supply wells) with a mapping grade Global Positioning System (GPS) field unit and include in the Phase I RI Report. The use of professional surveyors to record sub-slab locations is not required.
- 4) During a review of the Phase I RI Plan, a record of communication with the United States Fish & Wildlife Service to evaluate Endangered Species in the study area did not appear among the collection of inquiries. If the Sensitive Environment Contacts in Appendix C of the *Guidelines* is outdated, inaccurate, or invalid, please document these findings and notify the IHSB.
- 5) If metal concentrations in soil exceed Preliminary Residential (unrestricted) Health Based Soil Remediation Goals (SRGs) (e.g. arsenic and manganese), then Final Residential Health Based SRGs can be calculated. In addition, soil with reported metal concentrations (e.g. antimony and manganese) that exceed Protection of Groundwater SRGs suggests further assessment appears indicated. If reported metal concentrations in soil do not comply with Final Health Based or Protection of Groundwater SRGs, site-specific background samples are required to establish natural metals concentrations. Please note, the IHSB does not have established SRGs for total chromium.
- 6) The Site Map and Proposed Soil Boring figures included in the Phase I RI Plan do not include the location of drainage ditches, outfalls, and subsurface infrastructure including the facility's sanitary and industrial sewerage, stormwater system, floor drains and trenches, pits and

pipings, and underground utilities. In subsequent reporting, please update the Site Map and any ancillary figure to adequately illustrate any relevant drainage feature and all known or suspected subsurface infrastructure.

- 7) A CSM proposes a hypothesis of the Site's dynamic systems by clearly describing the suspected sources and types of contaminants present, contaminant release and transport mechanisms, rate of contaminant release and transport (where possible), affected environmental media, known and potential routes of migration, and known and potential human and environmental receptors. The CSM is a living document and evolves by incorporating both current and historical data, which includes historical data within the August 1994 Air Toxics Modeling Analyses (ATMA) of Travis Knits by Trigon Engineering Consultants, Inc. The ATMA reports the majority of waste PCE was discharged in process wastewater generated from the dyeing operations and the wringing of textiles through the slitter. In subsequent reporting, please revise your CSM to include these details of documented use and disposal of PCE at the Travis Knits facility.
- 8) The Phase I RI Plan proposes a Sub-Slab Vapor Field Survey in the northeastern section of the existing building prior to the implementation of the planned Soil Boring Activities. The IHSB understands that all records in the possession of Mohican Mills and Fab Industries Corp that describe manufacturing and supporting processes and details of hazardous substance storage, use, and disposal at Travis Knits were subsequently destroyed after the conclusion of operations. Because of these data gaps in our understanding of the facility's history, the Sub-Slab Vapor Field Survey will be expanded to include screening of the entire building footprint.
- 9) The IHSB understands that the Sub-Slab Vapor Field Screening Survey is being proposed to screen soil for impacts below the facility's concrete-slab floor. A review of the Soil & GW Report suggests a lack of correlation between the photoionization detector used to field screen soil and the concentrations of PCE in soil reported from laboratory analyses. In addition, the Sub-Slab Vapor Field Screening Survey does not take into account potential interference from preferential pathways of structural vapor intrusion created by subsurface utilities and relevant infrastructure. Please discuss any revisions to the Sub-Slab Field Screening Survey with the IHSB prior to implementation of this portion of the Phase I RI Plan.
- 10) The Phase I RI plan does not contain sufficient details of the required information included on the CSM – Checklist of Appendix A of the Division's *Vapor Intrusion Guidance*. As a result, the IHSB is unable to adequately evaluate and approve the proposed plans for Sub-Slab Vapor Sampling and Indoor Air Sampling at the present time. In subsequent reporting, please include the requested information of Appendix A, and your proposed plans for Sub-Slab Vapor Sampling and Indoor Air Sampling will be reevaluated.
- 11) A review of the Soil & GW Report indicates that laboratory analyses of soil collected from borings did not include any samples collected at depths of less than five (5) feet below the land surface (ft bls). In addition, the proposed sampling of up to two soil samples from soil borings based on field screening and laboratory analyses for select VOCs in the Phase I RI Plan does not comply with the IHSB's *Guidelines* for a Phase I RI assessment of a surface release with no visible contamination and known groundwater contaminants. Prior to

approval, the locations of proposed sample collection points must be clearly illustrated and justified. Upon receipt of the revised laboratory report from the Soil & GW Report and the results of the Sub-Slab Vapor Field Screening Survey, the IHSB will reevaluate a revised plan for Soil Assessment Activities. In addition, at the conclusion of soil assessment, the IHSB will evaluate and review your proposal for Groundwater Assessment Activities.

Qualifications:

The Phase I RI Plan will be qualified to include the following:


- 1) The Phase I RI Plan will be qualified to include sampling and reporting of select immediate exposure risks during these assessment activities. The Phase I RI Plan will be qualified to include annual VOC sampling of indoor air in the active office area referred to as **IAS-6** in the December 15, 2015 Sub-Slab/Indoor Air Assessment by Hart and Hickman and of water-supply wells referred to as **WSW-1** and **WSW-2** in the December 1, 2016 Additional Supply Well Sampling Activities by Hart and Hickman.
- 2) After receipt of draft results from the Sub-Slab Vapor Field Screening Survey, a revised addendum plan for Soil Assessment Activities will be submitted for review and approval. This plan will fully comply with the interval sampling requirements of Appendix A of the *Guidelines* and include required analytical parameters of the most current TCL and hazardous substance list metals in all surficial soil samples. The revised addendum plan for Soil Assessment Activities will also include justification and rationale for sampling locations and an appropriate figure (to scale) illustrating all proposed soil borings and areas of concern and any sampling necessary to establish site-specific background ranges for soil metals.
- 3) After receipt of the revised laboratory report from the Soil & GW Report, draft data from the Soil Assessment Activities, the requested information of Appendix A of the Division's *Vapor Intrusion Guidance*, and appropriately revised corresponding figures with subsurface infrastructure; the IHSB will review the proposed Groundwater Assessment Activities, Sub-Slab Vapor Sampling, and Indoor Air Sampling.

The Sub-Slab Vapor Field Screening Survey **portion** of the Phase I RI of the Travis Knits, Inc. is hereby **approved** subject to your acceptance of the three qualifications noted above. Before implementing the Sub-Slab Vapor Field Screening Survey, you must notify the IHSB no less than ten (10) working days prior to conducting any related field activity. Based on your estimated schedule, the IHSB understands that the draft data requested in the Sub-Slab Vapor Field Screening Survey will be completed in approximately eight weeks, and the draft data from the Sub-Slab Vapor Field Screening Survey will be received on or before October 12, 2016.

Field conditions at this active facility may limit mobility and access in the proposed areas of study. In addition, adjustments to the Sub-Slab Vapor Field Screening Survey may be necessary to accommodate the geology and subsurface infrastructure encountered. During field activities, document all modifications to the proposed scope and provide a reasonable rationale for any adjustments or changes that are made to the Sub-Slab Vapor Field Screening Survey. For specific assistance during field activities or the development of an appropriate Soil Assessment Activities plan, please contact the IHSB.

Mohican Mills, Inc. may not implement the remaining portions of the Phase I RI Plan until the items and information requested above have been received, and the remaining sections of the work plan have been approved in writing by the IHSB. If you have questions, need more information, or require adjustments to your proposed schedule, please contact me at (704) 663-1699.

Sincerely,



George D. Adams, Engineer
Division of Waste Management
NC Department of Environmental Quality

cc: Steven Myers, Fab Industries Corporation
sem4@msn.com

Matt Bramblett, Hart & Hickman, PC
mbramblett@harthickman.com

Steve Libbey, Hart & Hickman, PC
slibbey@harthickman.com

Susan Cooper, Womble Carlyle Sandridge & Rice, LLP
SuCooper@wcsr.com

Samantha Dye, Gaston County Environmental Health
samantha.dye@gastongov.com